THE CLAIMS

1. (Previously Presented) An arrangement for determining a vertical movement of a vehicle chassis relative to a vehicle body of a wheeled vehicle, said vehicle body being movably connected to the chassis, comprising

- a measuring entity arranged in the wheeled vehicle, wherein the measuring entity is configured to measure three respectively perpendicular linear accelerations of the wheeled vehicle and at least two rotational speeds, each relating to a rotational movement or a component of a rotational movement about a coordinate axis of the wheeled vehicle, wherein the at least two coordinate axes run perpendicularly to each other, and

- an analysis entity which is combined with the measuring entity and is operable to determine a momentary vertical distance between the vehicle body relative to the vehicle chassis using the three linear accelerations and the at least two rotational speeds, and without using any height-level or suspension travel measurements as input for determining the momentary vertical distance,

- wherein the analysis entity comprises a calculating unit which is operable to calculate a plurality of the momentary vertical distances using the at least two rotational speeds and the three linear accelerations.

2. (Previously Presented) An arrangement according to claim 1, wherein the measuring entity has acceleration sensors for measuring the linear accelerations and rotational speed sensors for measuring the rotational speeds, and wherein the acceleration sensors and the rotational speed sensors are parts of a preprepared hardware unit which is configured for installation in the wheeled vehicle.

3. (Previously Presented) An arrangement according to claim 1, wherein the measuring entity is configured such that the three linear accelerations are measurable as measured variables which are linearly independent of each other.

4. (Previously Presented) An arrangement according to claim 1, wherein the measuring entity is configured such that the at least two coordinate axes run perpendicularly to each other as a pair in each case.

5. (Previously Presented) An arrangement according to claim 1, wherein the analysis entity includes a calculating unit which is configured to calculate the momentary vertical distance between the vehicle body relative to the vehicle body with reference to a spring suspension, in particular a spring suspension which is moderated, between at least one of the wheels of the wheeled vehicle and the vehicle body.

6. (Previously Presented) A method for determining a vertical movement of a vehicle chassis relative to a vehicle body of a wheeled vehicle, said vehicle body being movably connected to the chassis, the method comprising the steps of:

- measuring three respectively perpendicular linear accelerations of the wheeled vehicle and at least two rotational speeds, each relating to a rotational movement or a component of a rotational movement about a coordinate axis of the wheeled vehicle, wherein the at least two coordinate axes run perpendicularly to each other;
- determining a momentary vertical distance between the vehicle body relative to the vehicle chassis using the three linear accelerations and the at least two rotational speeds, and without using any height-level or suspension travel measurements as input for determining the momentary vertical distance
- calculating a plurality of the momentary vertical distances using the at least two rotational speeds and the three linear accelerations, and
- providing the momentary vertical distances as input variables of systems for at least one of adjusting and monitoring properties of the wheeled vehicle.

7. (Previously Presented) A method according to claim 6, wherein the linear accelerations are measured using acceleration sensors and the rotational speeds are measured using rotational speed sensors, and wherein the acceleration sensors and the rotational speed sensors are parts of a preprepared hardware unit which is arranged in the wheeled vehicle.

8. (Previously Presented) A method according to claim 6, wherein the three linear accelerations are measured as measured variables which are linearly independent of each other.

9. (Previously Presented) A method according to claim 6, wherein the at least two coordinate axes of the rotational speeds run perpendicularly to each other as a pair in each case.

10. (Previously Presented) A method according to claim 6, wherein the momentary vertical distance between the vehicle body relative to the vehicle body is calculated with reference to a spring suspension, in particular a spring suspension which is moderated, between at least one of the wheels of the wheeled vehicle and the vehicle body.

11. (Previously Presented) An arrangement for determining a vertical movement of a vehicle chassis relative to a body of a vehicle, said vehicle body being movably connected to the chassis, comprising:

- a measuring entity configured to measure three respectively perpendicular linear accelerations of the vehicle and at least two rotational speeds, each relating to a rotational movement or a component of a rotational movement about a coordinate axis of the vehicle, wherein the at least two coordinate axes run perpendicularly to each other, and
- an analysis entity configured to determine a momentary vertical distance between the vehicle body relative to the vehicle chassis using the three linear accelerations and the at least two rotational speeds, and without using any height-level or suspension travel measurements as input for determining the momentary vertical distance,

wherein the analysis entity comprises a calculating unit operable to calculate a plurality of the momentary vertical distances using the at least two rotational speeds and the three linear accelerations.

12. (Previously Presented) An arrangement according to claim 11, wherein the measuring entity has acceleration sensors for measuring the linear accelerations and rotational speed sensors for measuring the rotational speeds.

13. (Previously Presented) An arrangement according to claim 12, wherein the acceleration sensors and the rotational speed sensors are parts of a preprepared hardware unit which is configured for installation in the wheeled vehicle.

14. (Previously Presented) An arrangement according to claim 11, wherein the measuring entity is configured such that the three linear accelerations are measurable as measured variables which are linearly independent of each other.

15. (Previously Presented) An arrangement according to claim 11, wherein the measuring entity is configured such that the at least two coordinate axes run perpendicularly to each other as a pair in each case.

16. (Previously Presented) An arrangement according to claim 11, wherein the analysis entity includes a calculating unit which is configured to calculate the momentary vertical distance between the vehicle body relative to the vehicle body with reference to a spring suspension, in particular a spring suspension which is moderated, between at least one of the wheels of the vehicle and the body.